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poorest in the Oak Ridge area, with 20.9% of total families living below the poverty level. (Five of the other six census tracts listed in the Y-12 SW-EIS have less than 10% families living below the poverty level) (I, 4-96).

The Scarboro community is precisely the kind of community the President of the United States had in mind when he signed Executive Order 12898—it is a low-income community of color which will bear a disproportionate share of the environmental and health impacts of releases from activities at the Y-12 Nuclear Weapons Complex. Of this fact, there can be no doubt.

DOE's failure to accord the Scarboro community the status that would invoke thorough environmental justice analysis, and the subsequent absence of any serious environmental justice analysis in the Y-12 SW-EIS smacks of racism. It was racism that first placed African Americans in the "colored hutment area" during the Manhattan Project; it is racism that has continued to isolate the Scarboro community in the most heavily impacted area proximate to the Oak Ridge Reservation; it is racism that motivated DOE's historic refusal to give serious consideration to the effects of historic releases on people living in Scarboro; and it is racism that dismissed Scarboro's legitimate environmental justice standing with a mere sentence in the Y-12 SW-EIS.

This low-income community of color has been and continues to be disproportionately impacted by environmental releases from the Y-12 Plant. The Y-12 SW-EIS (I, 4-95f.) states that Scarboro residents are estimated to have been exposed to airborne mercury at levels that exceeded standards in the late 1950's.

More recently, DOE's sampling of surface soils (top two inches) in May, 1998 (when the Y-12 Plant had been in "stand down" for four years), indicated significant contamination from the Y-12 Plant. The significance was not only in the quantities of contaminants discovered, but in the fact that other off-site areas used for comparison were not thus contaminated. 20/13

Examples of disproportionate contamination included:

- mercury - four samples (out of 42) indicated significant mercury contamination (significant being above the 95th percentile);
- selenium - one in four samples
- lead - one sample discovered lead concentrations of 130mg/kg; maximum off-site levels were 86mg/kg.
- radium 226 - the report limit for EPA is .04pCi/gm; levels in Scarboro samples ranged from .6 to 1.5pCi/g, or fifteen to thirty-seven times the standard for reportable limits.
- uranium - 25 of 42 samples had uranium concentrations above the 95th percentile.
- pesticides - samples detected three different pesticides in concentrations ranging from 111 times the reportable limit to 1600 times the reportable limit.

In presenting information to the Scarboro community in 1998, Larry Robinson, sampling analysis project director from Florida A&M University, indicated that the presence of contaminants above the 95th percentile indicated a significant contamination event. (Scarboro Community Environmental Study report, September 22, 1998)

In the face of this data, DOE asserts "None of the proposed alternatives would result in environmental justice impacts related to operations of Y-12 facilities." (S-53). DOE's assertion rests on a presumption that there will be no significant health or environmental impacts on any population and the utterly irrelevant (and undemonstrated) assertion that prevailing wind patterns are not in the direction of primarily minority or low-income populations.

DOE's presumption that there will be no releases from Y-12 operations that impact the off-site public is not credible. Accidental releases to air and water will occur despite the most thorough planning. Y-12's history demonstrates that the nuclear weapons plant is not immune to the laws of nature or human fallibility—sometimes things go as they were not planned to go, sometimes systems fail and sometimes people make mistakes.

The Y-12 SW-EIS falls back repeatedly on the mantra that "prevailing wind patterns are not in the direction of the minority or low-income populations surrounding

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**Comment No. 15(cont.)** **Issue Code: 05**

Section A.3.1.2 describes the storage of lithium hydride and lithium deuteride billets. Lithium hydride and lithium deuteride billets are sealed in a thin stainless steel can and transferred to lithium storage within the lithium operations facilities.

**Comment No. 16** **Issue Code: 05**

Concentrations of chlorinated volatile organic compounds (VOCs) in the groundwater in the vicinity of Y-12 source areas have remained relatively constant or have decreased slightly since 1988. In 1999, the highest concentrations of dissolved chlorinated solvents (about 7.7 mg/L) were found at the Waste Coolant Processing Area. EM has implemented a project to address the "East End VOC plumes." The purpose of the project is to mitigate off-site migration by installing a pump-and-treat system (installed and operating in 2000), and conducting an "Innovative Treatment Remediation Demonstration" to provide information for conceptualization of insitu remediation and bioremediation for the East End VOC plumes.

**Comment No. 17** **Issue Code: 07**

The commentor's initial observation was correct and a further review of the analysis resulted in the new values presented in Table E.3.2-2 of the Final SWEIS. The title of Table E.3.2-3 has also been changed to indicate "Carcinogenic" rather than "Noncarcinogenic." The information presented in Table E.3.2-1 in Section E.3.2 is based on screening results to determine which HAPs were potential chemicals of concern. Cadmium and other hazardous chemicals are monitored and reported in the ORR Annual Site Environmental Report. The levels are generally lower than the regulatory standards. Airborne emissions estimates, based on modeled concentrations, are conservative estimates of the airborne concentration. Consequently, the associated worker and public health risks are also conservative which is in keeping with EPA risk assessment paradigm. The airborne emissions data are considered representative of nonradionuclides under the No Action - Planning Basis Operations Alternative at Y-12. Using the chemical inventory to determine airborne emissions is conservative and likely overestimates

the site." (I, 5-86). This assertion, designed to relieve concerns about environmental justice, is of no actual practical value. It matters little what prevailing wind patterns are; what matters is which way the wind is blowing at the precise time of a release or an accident. The reality is that sometimes the wind blows toward Scarboro; Y-12 historic contamination is already present in the soil in Scarboro. And apparently, the wind blows in that direction more often than it does toward other residential communities, because the contamination is Scarboro is present in greater quantities than elsewhere.

From 1992 -1996, Y-12 had at least six violations of permits leading to off-site releases of contaminants in water, (two in 1999) during a period of relative inactivity. (Citations/Violations Associated with Environmental Activities on the Y-12 Plant Site, 1992-1999; handout at briefing, November 18, 1999).

Y-12 has also released other significant contaminants to the environment as a result of accidents. A January 24, 1992 incident resulting in the release of 650 pounds of hydrogen fluoride, a colorless, corrosive toxic gas, was noted in the investigation report to be the third accidental release of hydrogen fluoride in ten years. (*Report of Investigation of Accidental Release of Hydrogen Fluoride From the Y-12 Plant, Oak Ridge, Tennessee, January 24, 1992*, Y/LO-179. March 5, 1992, pp. 11, 26.)

In addition, in 1994, DOE declassified and released information on the historic inventory of highly enriched uranium at the Y-12 Plant. The figures released revealed an "inventory difference" of 988 kilograms of highly enriched uranium. Several explanations for the "loss" of highly enriched uranium were offered, among them loss to the environment, which, given the analysis of soil samples in the Scarboro community, accounts for some of the inventory difference. (*Declassification of Today's and Historical Inventory Differences for Highly Enriched Uranium at the Y-12 Plant in Oak Ridge, Tennessee*, DOE Fact Sheet accompanying press conference of Secretary of Energy Hazel O'Leary, 1994).

The Y-12 Site-Wide Environmental Impact Statement should be withdrawn and must be thoroughly revised to include a comprehensive discussion of contamination, past, present and possible future, in the Scarboro community. Members of the community must, as CEQ guidance requires, be engaged in the EIS preparation.

20/13 (cont.)

## ALTERNATIVES

The Y-12 SW-EIS presents five alternatives which receive varying degrees of consideration. The first is a "No Action" alternative (required by NEPA) which postulates continued activity at the Y-12 site at the same level as was conducted in 1998. The Y-12 SW-EIS quickly dismisses this alternative as not reasonable because it would not "meet Y-12 mission needs and would not reflect DOE's decision in the SSM PEIS ROD (61 FR 68014)." (I, 5-1).

The second alternative, called 1B by DOE, is "No Action-1987;" this alternative is presented because the Y-12 plant was operating at about 10% of its historic capacity in 1998. In 1987, it was operating at a fuller capacity. DOE presents a complicated rationale for a mathematical formula which would estimate 1987's level of activity in the new century.

The third alternative presented (Alternative 2 in the Y-12 SW-EIS) is the construction of a new Highly Enriched Uranium facility and upgrades to other production facilities which would approach the No Action-1987 level of environmental impact.

The fourth alternative (Alternative 3) is a new Special Materials Complex for chemical processing along with upgrades for continued operation at the No Action-1987 level.

The fifth alternative (Alternative 4) is the whole ball of wax. No Action 1987 for other processes, a new HEU facility, and a new Special Materials Complex. This alternative is DOE's preferred alternative.

The baseline proposed by DOE (40% of the 1987 level of emissions) is unacceptable. Historic activities at the Y-12 Plant led to it being listed on the National Priorities List of the Environmental Protection Agency in December, 1989. This citation bestowed upon Y-12 the dubious distinction of being among the most significantly contaminated

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**Comment No. 17 (cont.)** **Issue Code: 07**
emissions expected when Y-12 restarts the remaining operations from the 1994 stand-down because of the assumption that all facilities would operate at 2,000 hours per year, and 100 percent of the purchased chemicals would be released to the atmosphere from the facilities.

**Comment No. 18** **Issue Code: 16**
The SWEIS analyzes impacts for the overall Y-12 mission (No Action - Planning Basis Operations) and the construction and operation of new facilities for the HEU Materials Mission and Special Materials Mission at Y-12. Impacts on the environment and health and safety from current operations, and the effects of past releases are included under the No Action - Status Quo Alternative. Impact analysis included a classified data source review which is not detailed in the SWEIS.

**Comment No. 19** **Issue Code: 12**
Currently, Y-12 stores liquid LLW and mixed LLW for treatment and disposal. Solid LLW is currently stored pending ORR availability of off-site or planned on-site disposal facilities. Solid mixed LLW is shipped to ETTP for incineration and off-site commercial vendors for treatment and disposal. Section 4.11 describes DOE's approach to the management of waste including waste generated at Y-12. The Waste Management PEIS (DOE/EIS-0200-F) analyzed the impacts of managing five types of waste generated at a number of DOE sites including ORR. ORR manages TRU, LLW, mixed LLW and hazardous waste. In managing these waste, DOE has decided that TRU waste would be sent to the Waste Isolation Pilot Plant (WIPP), and hazardous waste would continue to be shipped off-site for treatment and disposal. For management of LLW and mixed LLW, DOE prefers regional disposal at Hanford and Nevada Test Site. A ROD for LLW and mixed LLW treatment and disposal was issued in February 2000 (65 FR 10061, February 25, 2000) which is consistent with the